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WHAT IS CLAIMED IS:

- 1. A method of making a three-dimensional object, comprising the steps of:
- (a) forming a powder material layer of inorganic material;
 - (b) irradiating an optical beam on a predetermined portion of the powder material layer to form a first sintered layer and integrate the first sintered layer with a second sintered layer just below the first sintered layer;
 - (c) repeating the steps (a) and (b) to form a sintered block united with a plurality of the first and second sintered layers, the sides of the sintered block including a concave portion;
- (d) removing an excess portion from a surface of the sintered block; and
 - (e) repeating the steps (c) and (d) with respect to the sintered block from which the excess portion is removed, in order to make a target shape of a three-dimensional object united with a plurality of the sintered blocks.
 - 2. The method according to claim 1, the concave portion is formed on a lower part of the sintered block.
- 25 3. The method according to claim 1, an upper surface of the

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concave portion is declined from the outside toward the inside.

- 4. The method according to claim 1, further comprising the step of uniting with a thin sheet covering the top surface of the sintered block.
 - 5. The method according to claim 1, further comprising the step of treating the surface of the sintered block removed the excess portion to be unreactive with the powder material.
 - 6. The method according to claim 5, further comprising, after the step of treating the surface, the step of placing non-adhesive powder around the surface of the sintered block.
 - 7. The method according to claim 5, further comprising, after the step of treating the surface, the step of placing a mask on the top surface of the sintered block, the mask having an aperture that is approximately equal to the outline of the sintered block.
 - 8. A method of making a three-dimensional object, comprising the steps of:
- (a) forming a powder material layer of inorganic
 25 material;

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- (b) irradiating an optical beam along an outline of predetermined portion to be sintered of the powder material layer to form an outline-sintered portion;
- (c) irradiating the optical beam on all of predetermined portions to be sintered of the powder material layer to form a first sintered layer and integrate the first sintered layer with a second sintered layer just below the first sintered layer, in which each of the predetermined portions is the predetermined portion;
- 10 (d) repeating the steps (a) and (c) to form a sintered block united with a plurality of the first and second sintered layers;
 - (e) removing an excess portion from a surface of the sintered block; and
- 15 (f) repeating the steps (a), (b), (c), (d) and (e) with respect to the sintered block removed the excess portion to make a target shape of a three-dimensional object united with a plurality of the sintered blocks.

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